

Date: Mon, 20 Dec 93 04:30:37 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V93 #116
To: Ham-Space

Ham-Space Digest Mon, 20 Dec 93 Volume 93 : Issue 116

Today's Topics:

 ORBS\$351.2L.AMSAT
 ORBS\$351.MICRO.AMSAT
 ORBS\$351.MISC.AMSAT
 ORBS\$351.OSCAR.AMSAT
 ORBS\$351.WEATH.AMSAT
 Satel Tracking Software (2 msgs)
 Weather Satellite Radio Report 2/1993

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

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We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 17 Dec 1993 06:48:00 MST
From: mvb.saic.com!unogate!news.service.uci.edu!usc!math.ohio-state.edu!
cyber2.cyberstore.ca!nntp.cs.ubc.ca!cs.ubc.ca!scapa.cs.ualberta.ca!adec23!ve6mgs!
usenet@network.ucsd.edu
Subject: ORBS\$351.2L.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-351.N
2Line Orbital Elements 351.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX December 17, 1993
BID: \$ORBS-351.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ

2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJ KKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10

1 14129U 83058B 93329.34450477 .000000009 00000-0 10000-3 0 2133
2 14129 27.1217 354.5434 6014493 132.9243 298.0909 2.06477387 78587

UO-11

1 14781U 84021B 93347.63778071 .000000336 00000-0 61040-4 0 6186
2 14781 97.7957 5.9733 0012132 138.7307 221.4801 14.69101502523065

RS-10/11

1 18129U 87054A 93346.85887632 .000000052 00000-0 50838-4 0 8160
2 18129 82.9251 106.5708 0011558 175.5353 184.6087 13.72327864324350

AO-13

1 19216U 88051B 93347.76722590 -.000000126 00000-0 10000-4 0 8258
2 19216 57.9405 279.0991 7209579 330.4319 3.4139 2.09722294 42126

FO-20

1 20480U 90013C 93348.51106707 .000000001 00000-0 29498-4 0 6142
2 20480 99.0150 170.4022 0541436 37.9788 325.8201 12.83222705180430

AO-21

1 21087U 91006A 93346.53792222 .000000085 00000-0 82657-4 0 3754
2 21087 82.9450 280.8321 0033923 244.0125 115.7536 13.74529858143941

RS-12/13

1 21089U 91007A 93348.49534730 .000000073 00000-0 71177-4 0 6184
2 21089 82.9194 148.4132 0028050 263.3433 96.4670 13.74031986143289

ARSENE

1 22654U 93031B 93321.93138545 -.000000051 00000-0 10000-3 0 2108
2 22654 1.4185 113.8817 2935300 161.0091 211.2000 1.42195961 2757

UO-14

1 20437U 90005B 93349.67199115 .000000087 00000-0 41549-4 0 9180
2 20437 98.6030 71.8539 0011561 14.3284 345.8240 14.29810426203360

AO-16

1 20439U 90005D 93348.68500703 .000000071 00000-0 35203-4 0 7182
2 20439 98.6114 71.9264 0011935 17.1705 342.9896 14.29866727203231

DO-17

1 20440U 90005E 93349.21698811 .000000085 00000-0 40830-4 0 7189
2 20440 98.6116 72.7157 0011956 15.9664 344.1900 14.30004552203320

WO-18

1 20441U 90005F 93348.69937128 .000000062 00000-0 31887-4 0 7196
2 20441 98.6116 72.2175 0012540 16.4110 343.7492 14.29981529203257

LO-19

1 20442U 90005G 93349.24947759 .000000055 00000-0 29135-4 0 7184
2 20442 98.6118 72.9752 0012907 14.3827 345.7680 14.30074224203334

UO-22

1 21575U 91050B 93347.69917846 .000000129 00000-0 50647-4 0 4185
2 21575 98.4537 60.7730 0008351 118.5223 241.6789 14.36873420126442

KO-23

1	22077U	92052B	93345.39316701	.000000000	00000-0	10000-3	0	3145
2	22077	66.0888	313.1719	0006629	333.7426	26.3244	12.86282118	62639

AO-27

1	22825U	93061C	93340.63744409	.00000102	00000-0	49453-4	0	2157
2	22825	98.6748	53.2005	0009518	54.0663	306.1406	14.27594182	10212

IO-26

1	22826U	93061D	93340.21182841	.000000089	00000-0	43990-4	0	2163
2	22826	98.6747	52.7873	0010063	55.9732	304.2402	14.27696330	10159

KO-25

1	22830U	93061H	93343.69918726	.00000114	00000-0	53800-4	0	2173
2	22830	98.5771	55.5101	0011977	14.6554	345.4937	14.28021359	10653

NOAA-9

1	15427U	84123A	93342.70049786	.00000140	00000-0	84766-4	0	6165
2	15427	99.0787	25.7011	0015669	39.5125	320.7148	14.13568935463439	

NOAA-10

1	16969U	86073A	93348.68493674	.00000115	00000-0	57386-4	0	5153
2	16969	98.5126	358.3040	0013631	144.1093	216.1007	14.24850683376333	

MET-2/17

1	18820U	88005A	93349.70345839	.000000047	00000-0	36174-4	0	2176
2	18820	82.5455	54.5487	0016373	341.3246	18.7334	13.84701640296968	

MET-3/2

1	19336U	88064A	93346.80315956	.000000043	00000-0	10000-3	0	2174
2	19336	82.5436	95.5811	0017397	13.4176	346.7420	13.16962105258724	

NOAA-11

1	19531U	88089A	93343.64835682	.00000108	00000-0	68580-4	0	4148
2	19531	99.1541	323.1130	0011352	309.4166	50.6021	14.12938766268450	

MET-2/18

1	19851U	89018A	93347.32765656	.000000073	00000-0	60176-4	0	2173
2	19851	82.5189	292.0914	0015591	31.7134	328.4975	13.84351562241975	

MET-3/3

1	20305U	89086A	93349.30258631	.000000039	00000-0	10000-3	0	9241
2	20305	82.5570	37.1296	0010491	27.8414	332.3188	13.09350075198928	

MET-2/19

1	20670U	90057A	93340.51939313	.000000015	00000-0	79036-5	0	7162
2	20670	82.5454	1.5084	0015399	333.1603	26.8773	13.84183900173965	

FY-1/2

1	20788U	90081A	93353.47337400	.000000513	00000-0	36251-3	0	8262
2	20788	98.8532	14.2782	0015572	148.2947	217.4563	14.01401993168534	

MET-2/20

1	20826U	90086A	93349.33459309	.000000049	00000-0	39351-4	0	7171
2	20826	82.5249	292.2530	0012249	199.1685	160.9002	13.83566595162334	

MET-3/4

1	21232U	91030A	93338.45465636	.000000043	00000-0	10000-3	0	6211
2	21232	82.5407	307.2624	0012656	318.6913	41.3690	13.16460415125735	

NOAA-12

1	21263U	91032A	93343.68590379	.00000196	00000-0	96500-4	0	8212
2	21263	98.6398	10.4630	0013990	67.1544	293.1121	14.22342930133592	

MET-3/5

1 21655U 91056A 93346.67795598 .000000043 00000-0 10000-3 0 6203
2 21655 82.5585 248.4511 0013414 309.3762 50.6337 13.16825830111916

MET-2/21

1 22782U 93055A 93348.52059674 .000000055 00000-0 45108-4 0 2173
2 22782 82.5480 352.7765 0023371 26.7908 333.4566 13.82994283 14568

MIR

1 16609U 86017A 93349.52245668 .000006735 00000-0 87706-4 0 309
2 16609 51.6186 28.4721 0005889 93.5243 266.6245 15.59059652447385

HUBBLE

1 20580U 90037B 93347.93985058 .000000714 00000-0 64125-4 0 3872
2 20580 28.4711 345.7216 0005790 312.5225 47.3535 14.90379146 1720

GRO

1 21225U 91027B 93348.63568260 .000005854 00000-0 10489-3 0 71
2 21225 28.4628 72.2835 0031872 6.7684 353.3175 15.46850505 28447

UARS

1 21701U 91063B 93347.79704880 .000002750 00000-0 26250-3 0 4198
2 21701 56.9823 181.8981 0005886 101.3706 258.6133 14.96277614123176

POSAT

1 22829U 93061G 93347.13414048 .000000107 00000-0 51149-4 0 2099
2 22829 98.6664 59.6556 0010662 24.2746 335.9074 14.27989961 11144

/EX

Date: Fri, 17 Dec 1993 06:40:00 MST

From: agate!howland.reston.ans.net!math.ohio-state.edu!cyber2.cyberstore.ca!

nnntp.cs.ubc.ca!cs.ubc.ca!scapa.cs.ualberta.ca!adec23!ve6mgs!usenet@ames.arpa

Subject: ORBS\$351.MICRO.AMSAT

To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-351.D

Orbital Elements 351.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS

FROM WA5QGD FORT WORTH,TX December 17, 1993

BID: \$ORBS-351.D

TO ALL RADIO AMATEURS BT

Satellite: UO-14

Catalog number: 20437

Epoch time: 93349.67199115

Element set: 918

Inclination: 98.6030 deg

RA of node: 71.8539 deg

Eccentricity: 0.0011561

Arg of perigee: 14.3284 deg

Mean anomaly: 345.8240 deg

Mean motion: 14.29810426 rev/day
Decay rate: 8.7e-07 rev/day²
Epoch rev: 20336
Checksum: 304

Satellite: A0-16
Catalog number: 20439
Epoch time: 93348.68500703
Element set: 718
Inclination: 98.6114 deg
RA of node: 71.9264 deg
Eccentricity: 0.0011935
Arg of perigee: 17.1705 deg
Mean anomaly: 342.9896 deg
Mean motion: 14.29866727 rev/day
Decay rate: 7.1e-07 rev/day²
Epoch rev: 20323
Checksum: 317

Satellite: D0-17
Catalog number: 20440
Epoch time: 93349.21698811
Element set: 718
Inclination: 98.6116 deg
RA of node: 72.7157 deg
Eccentricity: 0.0011956
Arg of perigee: 15.9664 deg
Mean anomaly: 344.1900 deg
Mean motion: 14.30004552 rev/day
Decay rate: 8.5e-07 rev/day²
Epoch rev: 20332
Checksum: 290

Satellite: W0-18
Catalog number: 20441
Epoch time: 93348.69937128
Element set: 719
Inclination: 98.6116 deg
RA of node: 72.2175 deg
Eccentricity: 0.0012540
Arg of perigee: 16.4110 deg
Mean anomaly: 343.7492 deg
Mean motion: 14.29981529 rev/day
Decay rate: 6.2e-07 rev/day²
Epoch rev: 20325
Checksum: 302

Satellite: L0-19

Catalog number: 20442
Epoch time: 93349.24947759
Element set: 718
Inclination: 98.6118 deg
RA of node: 72.9752 deg
Eccentricity: 0.0012907
Arg of perigee: 14.3827 deg
Mean anomaly: 345.7680 deg
Mean motion: 14.30074224 rev/day
Decay rate: 5.5e-07 rev/day²
Epoch rev: 20333
Checksum: 314

Satellite: UO-22
Catalog number: 21575
Epoch time: 93347.69917846
Element set: 418
Inclination: 98.4537 deg
RA of node: 60.7730 deg
Eccentricity: 0.0008351
Arg of perigee: 118.5223 deg
Mean anomaly: 241.6789 deg
Mean motion: 14.36873420 rev/day
Decay rate: 1.29e-06 rev/day²
Epoch rev: 12644
Checksum: 325

Satellite: K0-23
Catalog number: 22077
Epoch time: 93345.39316701
Element set: 314
Inclination: 66.0888 deg
RA of node: 313.1719 deg
Eccentricity: 0.0006629
Arg of perigee: 333.7426 deg
Mean anomaly: 26.3244 deg
Mean motion: 12.86282118 rev/day
Decay rate: .00000000 rev/day²
Epoch rev: 6263
Checksum: 277

Satellite: A0-27
Catalog number: 22825
Epoch time: 93340.63744409
Element set: 215
Inclination: 98.6748 deg
RA of node: 53.2005 deg
Eccentricity: 0.0009518

Arg of perigee: 54.0663 deg
Mean anomaly: 306.1406 deg
Mean motion: 14.27594182 rev/day
Decay rate: 1.02e-06 rev/day^2
Epoch rev: 1021
Checksum: 276

Satellite: IO-26
Catalog number: 22826
Epoch time: 93340.21182841
Element set: 216
Inclination: 98.6747 deg
RA of node: 52.7873 deg
Eccentricity: 0.0010063
Arg of perigee: 55.9732 deg
Mean anomaly: 304.2402 deg
Mean motion: 14.27696330 rev/day
Decay rate: 8.9e-07 rev/day^2
Epoch rev: 1015
Checksum: 288

Satellite: K0-25
Catalog number: 22830
Epoch time: 93343.69918726
Element set: 217
Inclination: 98.5771 deg
RA of node: 55.5101 deg
Eccentricity: 0.0011977
Arg of perigee: 14.6554 deg
Mean anomaly: 345.4937 deg
Mean motion: 14.28021359 rev/day
Decay rate: 1.14e-06 rev/day^2
Epoch rev: 1065
Checksum: 304

/EX

Date: Fri, 17 Dec 1993 06:46:00 MST
From: agate!howland.reston.ans.net!math.ohio-state.edu!cyber2.cyberstore.ca!
nnntp.cs.ubc.ca!cs.ubc.ca!scapa.cs.ualberta.ca!adec23!ve6mgs!usenet@ames.arpa
Subject: ORBS\$351.MISC.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-351.M
Orbital Elements 351.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH, TX December 17, 1993
BID: \$ORBS-351.M
TO ALL RADIO AMATEURS BT

Satellite: MIR
Catalog number: 16609
Epoch time: 93349.52245668
Element set: 30
Inclination: 51.6186 deg
RA of node: 28.4721 deg
Eccentricity: 0.0005889
Arg of perigee: 93.5243 deg
Mean anomaly: 266.6245 deg
Mean motion: 15.59059652 rev/day
Decay rate: 6.735e-05 rev/day²
Epoch rev: 44738
Checksum: 331

Satellite: HUBBLE
Catalog number: 20580
Epoch time: 93347.93985058
Element set: 387
Inclination: 28.4711 deg
RA of node: 345.7216 deg
Eccentricity: 0.0005790
Arg of perigee: 312.5225 deg
Mean anomaly: 47.3535 deg
Mean motion: 14.90379146 rev/day
Decay rate: 7.14e-06 rev/day²
Epoch rev: 172
Checksum: 300

Satellite: GRO
Catalog number: 21225
Epoch time: 93348.63568260
Element set: 7
Inclination: 28.4628 deg
RA of node: 72.2835 deg
Eccentricity: 0.0031872
Arg of perigee: 6.7684 deg
Mean anomaly: 353.3175 deg
Mean motion: 15.46850505 rev/day
Decay rate: 5.854e-05 rev/day²
Epoch rev: 2844
Checksum: 305

Satellite: UARS

Catalog number: 21701
Epoch time: 93347.79704880
Element set: 419
Inclination: 56.9823 deg
RA of node: 181.8981 deg
Eccentricity: 0.0005886
Arg of perigee: 101.3706 deg
Mean anomaly: 258.6133 deg
Mean motion: 14.96277614 rev/day
Decay rate: 2.750e-05 rev/day^2
Epoch rev: 12317
Checksum: 319

Satellite: POSAT
Catalog number: 22829
Epoch time: 93347.13414048
Element set: 209
Inclination: 98.6664 deg
RA of node: 59.6556 deg
Eccentricity: 0.0010662
Arg of perigee: 24.2746 deg
Mean anomaly: 335.9074 deg
Mean motion: 14.27989961 rev/day
Decay rate: 1.07e-06 rev/day^2
Epoch rev: 1114
Checksum: 311

/EX

Date: Fri, 17 Dec 1993 06:38:00 MST
From: sgiblab!spool.mu.edu!uwm.edu!math.ohio-state.edu!cyber2.cyberstore.ca!
nnntp.cs.ubc.ca!cs.ubc.ca!scapa.cs.ualberta.ca!adec23!ve6mgs!usenet@ames.arpa
Subject: ORBS\$351.OSCAR.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-351.0
Orbital Elements 351.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM WA5QGD FORT WORTH,TX December 17, 1993
BID: \$ORBS-351.0
TO ALL RADIO AMATEURS BT

Satellite: AO-10
Catalog number: 14129
Epoch time: 93329.34450477

Element set: 213
Inclination: 27.1217 deg
RA of node: 354.5434 deg
Eccentricity: 0.6014493
Arg of perigee: 132.9243 deg
Mean anomaly: 298.0909 deg
Mean motion: 2.06477387 rev/day
Decay rate: 9.0e-08 rev/day^2
Epoch rev: 7858
Checksum: 313

Satellite: UO-11
Catalog number: 14781
Epoch time: 93347.63778071
Element set: 618
Inclination: 97.7957 deg
RA of node: 5.9733 deg
Eccentricity: 0.0012132
Arg of perigee: 138.7307 deg
Mean anomaly: 221.4801 deg
Mean motion: 14.69101502 rev/day
Decay rate: 3.36e-06 rev/day^2
Epoch rev: 52306
Checksum: 297

Satellite: RS-10/11
Catalog number: 18129
Epoch time: 93346.85887632
Element set: 816
Inclination: 82.9251 deg
RA of node: 106.5708 deg
Eccentricity: 0.0011558
Arg of perigee: 175.5353 deg
Mean anomaly: 184.6087 deg
Mean motion: 13.72327864 rev/day
Decay rate: 5.2e-07 rev/day^2
Epoch rev: 32435
Checksum: 326

Satellite: A0-13
Catalog number: 19216
Epoch time: 93347.76722590
Element set: 825
Inclination: 57.9405 deg
RA of node: 279.0991 deg
Eccentricity: 0.7209579
Arg of perigee: 330.4319 deg
Mean anomaly: 3.4139 deg

Mean motion: 2.09722294 rev/day
Decay rate: -1.26e-06 rev/day²
Epoch rev: 4212
Checksum: 317

Satellite: F0-20
Catalog number: 20480
Epoch time: 93348.51106707
Element set: 614
Inclination: 99.0150 deg
RA of node: 170.4022 deg
Eccentricity: 0.0541436
Arg of perigee: 37.9788 deg
Mean anomaly: 325.8201 deg
Mean motion: 12.83222705 rev/day
Decay rate: 1.0e-08 rev/day²
Epoch rev: 18043
Checksum: 268

Satellite: A0-21
Catalog number: 21087
Epoch time: 93346.53792222
Element set: 375
Inclination: 82.9450 deg
RA of node: 280.8321 deg
Eccentricity: 0.0033923
Arg of perigee: 244.0125 deg
Mean anomaly: 115.7536 deg
Mean motion: 13.74529858 rev/day
Decay rate: 8.5e-07 rev/day²
Epoch rev: 14394
Checksum: 308

Satellite: RS-12/13
Catalog number: 21089
Epoch time: 93348.49534730
Element set: 618
Inclination: 82.9194 deg
RA of node: 148.4132 deg
Eccentricity: 0.0028050
Arg of perigee: 263.3433 deg
Mean anomaly: 96.4670 deg
Mean motion: 13.74031986 rev/day
Decay rate: 7.3e-07 rev/day²
Epoch rev: 14328
Checksum: 312

Satellite: ARSENE

Catalog number: 22654
Epoch time: 93321.93138545
Element set: 210
Inclination: 1.4185 deg
RA of node: 113.8817 deg
Eccentricity: 0.2935300
Arg of perigee: 161.0091 deg
Mean anomaly: 211.2000 deg
Mean motion: 1.42195961 rev/day
Decay rate: -5.1e-07 rev/day^2
Epoch rev: 275
Checksum: 241

/EX

Date: Fri, 17 Dec 1993 06:44:00 MST
From: mvb.saic.com!unogate!news.service.uci.edu!usc!math.ohio-state.edu!
cyber2.cyberstore.ca!nntp.cs.ubc.ca!cs.ubc.ca!scapa.cs.ualberta.ca!adec23!ve6mgs!
usenet@network.ucsd.edu
Subject: ORBS\$351.WEATH.AMSAT
To: ham-space@ucsd.edu

SB KEPS @ AMSAT \$ORBS-351.W
Orbital Elements 351.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH,TX December 17, 1993
BID: \$ORBS-351.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 93342.70049786
Element set: 616
Inclination: 99.0787 deg
RA of node: 25.7011 deg
Eccentricity: 0.0015669
Arg of perigee: 39.5125 deg
Mean anomaly: 320.7148 deg
Mean motion: 14.13568935 rev/day
Decay rate: 1.40e-06 rev/day^2
Epoch rev: 46343
Checksum: 316

Satellite: NOAA-10
Catalog number: 16969

Epoch time: 93348.68493674
Element set: 515
Inclination: 98.5126 deg
RA of node: 358.3040 deg
Eccentricity: 0.0013631
Arg of perigee: 144.1093 deg
Mean anomaly: 216.1007 deg
Mean motion: 14.24850683 rev/day
Decay rate: 1.15e-06 rev/day^2
Epoch rev: 37633
Checksum: 304

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 93349.70345839
Element set: 217
Inclination: 82.5455 deg
RA of node: 54.5487 deg
Eccentricity: 0.0016373
Arg of perigee: 341.3246 deg
Mean anomaly: 18.7334 deg
Mean motion: 13.84701640 rev/day
Decay rate: 4.7e-07 rev/day^2
Epoch rev: 29696
Checksum: 325

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 93346.80315956
Element set: 217
Inclination: 82.5436 deg
RA of node: 95.5811 deg
Eccentricity: 0.0017397
Arg of perigee: 13.4176 deg
Mean anomaly: 346.7420 deg
Mean motion: 13.16962105 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 25872
Checksum: 307

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 93343.64835682
Element set: 414
Inclination: 99.1541 deg
RA of node: 323.1130 deg
Eccentricity: 0.0011352
Arg of perigee: 309.4166 deg

Mean anomaly: 50.6021 deg
Mean motion: 14.12938766 rev/day
Decay rate: 1.08e-06 rev/day^2
Epoch rev: 26845
Checksum: 282

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 93347.32765656
Element set: 217
Inclination: 82.5189 deg
RA of node: 292.0914 deg
Eccentricity: 0.0015591
Arg of perigee: 31.7134 deg
Mean anomaly: 328.4975 deg
Mean motion: 13.84351562 rev/day
Decay rate: 7.3e-07 rev/day^2
Epoch rev: 24197
Checksum: 331

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 93349.30258631
Element set: 924
Inclination: 82.5570 deg
RA of node: 37.1296 deg
Eccentricity: 0.0010491
Arg of perigee: 27.8414 deg
Mean anomaly: 332.3188 deg
Mean motion: 13.09350075 rev/day
Decay rate: 3.9e-07 rev/day^2
Epoch rev: 19892
Checksum: 296

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 93340.51939313
Element set: 716
Inclination: 82.5454 deg
RA of node: 1.5084 deg
Eccentricity: 0.0015399
Arg of perigee: 333.1603 deg
Mean anomaly: 26.8773 deg
Mean motion: 13.84183900 rev/day
Decay rate: 1.5e-07 rev/day^2
Epoch rev: 17396
Checksum: 299

Satellite: FY-1/2
Catalog number: 20788
Epoch time: 93353.47337400
Element set: 826
Inclination: 98.8532 deg
RA of node: 14.2782 deg
Eccentricity: 0.0015572
Arg of perigee: 148.2947 deg
Mean anomaly: 217.4563 deg
Mean motion: 14.01401993 rev/day
Decay rate: 5.13e-06 rev/day^2
Epoch rev: 16853
Checksum: 311

Satellite: MET-2/20
Catalog number: 20826
Epoch time: 93349.33459309
Element set: 717
Inclination: 82.5249 deg
RA of node: 292.2530 deg
Eccentricity: 0.0012249
Arg of perigee: 199.1685 deg
Mean anomaly: 160.9002 deg
Mean motion: 13.83566595 rev/day
Decay rate: 4.9e-07 rev/day^2
Epoch rev: 16233
Checksum: 319

Satellite: MET-3/4
Catalog number: 21232
Epoch time: 93338.45465636
Element set: 621
Inclination: 82.5407 deg
RA of node: 307.2624 deg
Eccentricity: 0.0012656
Arg of perigee: 318.6913 deg
Mean anomaly: 41.3690 deg
Mean motion: 13.16460415 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 12573
Checksum: 282

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 93343.68590379
Element set: 821
Inclination: 98.6398 deg
RA of node: 10.4630 deg

Eccentricity: 0.0013990
Arg of perigee: 67.1544 deg
Mean anomaly: 293.1121 deg
Mean motion: 14.22342930 rev/day
Decay rate: 1.96e-06 rev/day^2
Epoch rev: 13359
Checksum: 299

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 93346.67795598
Element set: 620
Inclination: 82.5585 deg
RA of node: 248.4511 deg
Eccentricity: 0.0013414
Arg of perigee: 309.3762 deg
Mean anomaly: 50.6337 deg
Mean motion: 13.16825830 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 11191
Checksum: 309

Satellite: MET-2/21
Catalog number: 22782
Epoch time: 93348.52059674
Element set: 217
Inclination: 82.5480 deg
RA of node: 352.7765 deg
Eccentricity: 0.0023371
Arg of perigee: 26.7908 deg
Mean anomaly: 333.4566 deg
Mean motion: 13.82994283 rev/day
Decay rate: 5.5e-07 rev/day^2
Epoch rev: 1456
Checksum: 327

/EX

Date: 19 Dec 93 08:22:00 GMT
From: ogicse!cs.uoregon.edu!sgiblab!rtech!amdahl!hip-hop.sbay.org!not-for-mail@network.ucsd.edu
Subject: Satel Tracking Software
To: ham-space@ucsd.edu

I am getting interested in satel trackings, and I would like some suggestions on what tracking shareware I should get.

All information are welcome.

Benjie

Date: 19 Dec 93 08:23:07 GMT
From: ogicse!cs.uoregon.edu!sgiblab!rtech!amdahl!hip-hop.sbay.org!not-for-mail@network.ucsd.edu
Subject: Satel Tracking Software
To: ham-space@ucsd.edu

I am getting interested in satel tracking, and I would like suggestions on what tracking shareware I should get.

All information are welcome.

Thanks,

Benjie

Date: Fri, 17 Dec 93 20:56:00 +0200
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!pipex!sunic!news.funet.fi!fuug!compart!leo.wikholm@network.ucsd.edu
Subject: Weather Satellite Radio Report 2/1993
To: ham-space@ucsd.edu

WEATHER SATELLITE RADIO REPORT 2/1993

December 17, 1993
Station: Helsinki (+60N +25.1E)
Finnish Weather Satellite Group

Status of polar-orbiting weather satellites:

satellite	frequency	status
NOAA 9	137,620 MHz	normal
NOAA 10	137,500 MHz	APT and BNC is off due to VHF-conflict with NOAA 12
NOAA 11	137,620 MHz	normal
NOAA 12	137,500 MHz	normal
METEOR 2-21	137,400 MHz	active. no images at higher latitudes

METEOR 3-3 137,300 MHz occasional
METEOR 3-5 137,300 MHz active. sends 20 lpm low-resolution IR
 images above dark areas. no images at
 higher latitudes (+60N)

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* Special thanks to Peter Henne for comments to the report! *

Please send your observations or comments to:

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internet: leo.wikholm@compart.fi
FidoNet : 2:220/861

End of Ham-Space Digest V93 #116
